

Micron- or submicron-sized particles have been applied for a variety of purposes in which their characteristic properties such as high specific surface area, excellent dispersibility and moderate mobility in their dispersion, are utilized. Their size is in the same range as the wavelength of visible light so that uses as optical materials are also expanding. In these days when much emphasis is on nano-science and nano-technology, nano-particles are also attracting much attention. Nanotechnology first created advanced nano-particles and, in turn, such nano-particles promoted the development of nano-technology. In addition to size, morphology and structure are other significant factors which donate functionality to particles. Even the nano-space within particles can be used for delicate reactions and the designed surfaces of particles often present a stage for elegant “molecular performances”. A new era was initiated when particles were assembled into ordered structures, so-called *colloidal crystals*. These are applied as optical and photonic devices, and contribute to progress in photonics and sensing technology. In terms of material resources, polymer particles are made not only of

general synthetic polymers but also from naturally occurring polymers, degradable polymers, and inorganic/organic composites. Technologies for preparation of desired particles such as particle-forming polymerization, molecular assembling, and modification of existing particles have undergone tremendous progress. They are an important cornerstone in the future of nano- and micro-spheres.

The 2nd International Symposium on Advanced Particles (ISAP-2009) / the 19th Iketani Conference focused its subject on these advanced particles. ISAP-2009 was held on April 26-29, 2009 at Keio University in Yokohama, Japan, being co-organized by Microspheres Symposium Committee, Japan and International Polymer Colloids Group, and sponsored by Iketani foundation of Science and Technology. ISAP-2009 was acknowledged as one of the events commemorating 150th anniversary of Keio University. 16 papers among more than 90 papers presented in ISAP-2009 were published in the ISAP-2009 issue of *Macromolecular Symposia*.

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Participants of the conference